

## Water Quality Basics for Hobbyists from 2013 Water Quality Monitoring

Milwaukee's drinking water quality is excellent for hobbyists. It makes for happy fish and tasty homebrew.

The following information is offered for those who use Milwaukee tap water for brewing, to fill their aquariums, for photofinishing, and other activities that require consistently pure, high-quality water. The data reflect water quality treatment and subsequent monitoring, or testing, from Jan. 1 – Dec. 31, 2013, provided for the annual Consumer Confidence Report, or Water Quality Report. Find complete information about our water treatment and water quality monitoring at [www.milwaukee.gov/water](http://www.milwaukee.gov/water).

### Typical Values for Treated Drinking Water

Parameter	Median Value	Range
Alkalinity	103 mg/L (as CaCO <sub>3</sub> )	87-109 ppm
Calcium	34 mg/L	31-36 mg/L
Chlorine*	1.61 mg/L	1.22-2.00 mg/L
Conductivity	309 uS/cm	298-322 uS/cm
Fluoride	0.58 mg/L	0.07-0.68 mg/L
Hardness, total (as CaCO <sub>3</sub> )	137 mg/L or 8.01 gpg	112-142 mg/L
Iron	0.006 mg/L	0.003-0.020 ppm
Nitrate, as N	0.25 mg/L	0.20-0.30 mg/L
pH	7.52	7.28-7.86
Potassium	1.4 mg/L	1.1-1.6 mg/L
Sodium	9.67 mg/L	8.17-13.53 mg/L
Temperature	46.6°F (8.1°C)	29.7°-71.1°F (-1.3 – 21.7°C)
Total Dissolved Solids	179 mg/L	173-187 mg/L

### Definitions

< = "is less than"

mg/L = milligrams per liter = ppm = parts per million

gpg = grains per gallon

NTU = Nephelometric Turbidity Units

uS/cm = microsiemens per centimeter

\* As total chloramine residual

As of Aug. 31, 2012, Milwaukee water is fluoridated at a level not to exceed 0.7 mg/L. The numbers here reflect data from the entire year.

**Water Treatment Process**

Milwaukee benefits from the fact that our source water, Lake Michigan, is a relatively clean source. We treat Lake Michigan water with ozone as the primary disinfectant. This highly reactive gas destroys illness-causing micro-organisms and harmful compounds, removes taste and odor compounds, and reduces the formation of disinfection byproducts. Particles are removed through coagulation, flocculation, settling, and biologically active filtration. Chlorine is added as a secondary disinfectant. Fluoride is added to reduce dental cavities. A phosphorous compound is added to control pipe corrosion to prevent lead and copper that may be present in pipes from leaching into the water. Finally, chloramine disinfection maintains a residual in the distribution system to protect against bacterial contamination. The Supervisory Control and Data Acquisition System (SCADA) at both treatment plants provides real-time data from chemical feed systems, including ozone, and all water quality monitoring as well as control of water pumping stations and the distribution system. Pure, fresh water arrives at your taps.

**A Leader in Water Quality Monitoring**

The Milwaukee Water Works is committed to ensuring your water quality, reliability, and security. We are recognized by the U.S. Environmental Protection Agency and the American Water Works Association as a leader in providing the highest quality drinking water and water quality monitoring.

**Our Customers**

We are the City of Milwaukee-owned utility, providing pure, safe, and reliable water service to over 860,000 people in an area of 196 square miles in Milwaukee, Brown Deer, Butler, Franklin, Greendale, Greenfield, Hales Corners, Menomonee Falls, Mequon, New Berlin, Shorewood, St. Francis, Thiensville, Wauwatosa, West Allis, West Milwaukee, and to the Milwaukee County Grounds.

For questions or additional information, please contact our Water Quality section, (414) 286-2585.

Milwaukee Water Works Customer Service Center, [Monday - Friday, 7:30 a.m. - 5:00 p.m.](#)  
[Telephone \(414\) 286-2830](#)      TDD (414) 286-8801      24-Hour Control Center, (414) 286-3710  
Non-emergency email: [watwebcs@milwaukee.gov](mailto:watwebcs@milwaukee.gov)  
Para una explicación en español, por favor al llame (414) 286-2830.